AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Original) A method of designing an engine case static structure of a gas turbine engine, comprising the steps of:

creating signals representing an engine case static structure knowledge base of information having a plurality of design rule signals with respect to a corresponding plurality of parameter signals of associated elements of an engine case static structure, wherein the engine case static structure knowledge base comprises a data value signal for each one of the plurality of design rule signals;

entering a desired data value signal for a selected one of the plurality of parameter signals of an associated element of the engine case static structure;

comparing the entered desired data value signal for the selected one of the plurality of parameter signals with the corresponding data value signal in the engine case static structure knowledge base for the corresponding one of the plurality of design rule signals; and

creating signals representative of a geometric representation of the selected one of the plurality of parameter signals of the associated element of the engine case static structure if the result of the step of comparing is such that the entered desired data value signal for the selected one of the plurality of parameter signals is determined to have a first predetermined relationship with respect to the corresponding data value signal in the engine case static structure knowledge base for the selected one of the plurality of design rule signals.

2. (Currently amended) The method of Claim 1, wherein the step of creating the signals representative of a geometric representation of the selected one of the plurality of parameter signals of the associated element of the engine case static structure further comprises the step of updating signals representing a model ~~the model~~ of the engine case static structure with the selected one of the plurality of parameter signals of the associated element of the engine case static structure.

3. (Original) The method of Claim 1, further comprising the step of modifying the entered desired data value signal for the selected one of the plurality of parameter signals if the result of the step of comparing is such that the entered desired data value signal for the selected one of the plurality of parameter signals is determined to have a second predetermined relationship with respect to the corresponding at least one data value signal in the engine case static structure knowledge base for the selected one of the plurality of design rule signals.

4. (Original) The method of Claim 3, further comprising the steps of:

comparing the modified data value signal for the selected one of the plurality of parameter signals with the corresponding data value signal in the engine case static structure knowledge base for the corresponding one of the plurality of design rule signals; and

creating signals representative of a second geometric representation of the selected one of the plurality of parameter signals of the associated element of the engine case static structure if the result of the step of comparing is such that the modified data value signal for the selected one of the plurality of parameter signals is determined to be of the first predetermined relationship with respect to the corresponding data value signal in the engine case static structure knowledge base for the corresponding one of the plurality of design rule signals.

5. (Original) The method of Claim 1, further comprising the step of storing the signals representative of the created engine case static structure knowledge base of information.

6. (Original) The method of Claim 1, further comprising the step of displaying the signals representative of the created geometric representation of the selected one of the plurality of parameter signals of the associated element of the engine case static structure.

7. (Original) The method of claim 1, further comprising the step of generating wall thickness parameter signals includes manufacturing wall parameter signals, pressure generated parameter signals, containment generated parameter signals, and wall radius parameter signals.

8. (Original) The method of claim 1, further comprising the step of generating strut configuration parameter signals includes flow blockage parameter signals, strut material properties parameter signals, and strut dimension parameter signals.

9. (Original) The method of claim 1, further including the steps of:

receiving signals representing flowpath parameters for entering aerodynamic performance requirement parameter signals;

receiving signals representing performance parameters for entering engine case static structure thermodynamic performance requirement signals; and

creating a default geometric representation of the engine case static structure utilizing the flowpath parameter signals, the performance parameter signals, and the design rule signals.

10. (Original) The method of Claim 1, further comprising the step of analyzing the signals representative of the geometric representation of the selected one of the plurality of parameter signals of the associated element of the engine case static structure.

11. (Original) The method of Claim 10, wherein the step of analyzing the signals representative of the geometric representation of the selected one of the plurality of parameter signals of the selected element of the engine case static structure further comprises the step of performing a weight analysis on the signals representative of the geometric representation of the selected one of the plurality of parameter signals of the associated element of the engine case static structure.

12. (Original) The method of Claim 1, wherein the step of creating the signals representative of the geometric representation of the selected one of the plurality of parameter signals of the associated element of the engine case static structure further comprises the step of creating signals representative of the model of the engine case static structure.

13. (Original) The method of Claim 1, wherein the data value signal for each one of the plurality of design rule signals in the knowledge base comprises a numerical value.

14. (Original) The method of Claim 1, wherein the data value signal for each one of the plurality of design rule signals in the knowledge base comprises a range of values.

15. (Original) The method of Claim 1, wherein the step of entering a desired data value signal for a selected one of the plurality of parameter signals of an associated element of the engine case static structure further comprises the steps of:

presenting a data value signal for each one of the plurality of parameter signals of the associated element of the engine case static structure; and

selecting a desired data value signal for the selected one of the plurality of parameter signals of the associated element of the engine case static structure from the presented data value signal for each one of the plurality of parameter signals of the associated element of the engine case static structure.

16. (Original) The method of Claim 15, wherein the step of presenting a data value signal for each one of the plurality of parameter signals of the associated element of the engine case static structure further comprises the step of providing a visual display containing signals representative of a graphic depiction of the data value signal for each one of the plurality of parameter signals of the associated element of the engine case static structure.

17. (Original) A method of designing an engine case static structure for a gas turbine engine, comprising the steps of:

providing an engine case static structure knowledge base storing a plurality of engine case static structure design parameter signals corresponding to a plurality of design rule signals, wherein the engine case static structure knowledge base includes a design parameter signal for each of the design rule signals;

receiving a parameter value signal corresponding to the design parameter signal;

comparing the parameter value signal with the design parameter signal stored in the engine case static structure knowledge base; and

modifying the value of the design parameter signal if the parameter value signal has a first predetermined relationship with the design parameter signal and the design rule signal.

18. (Original) The method of claim 17, further comprising the steps of:

creating a geometric representation of the engine case static structure by utilizing the design parameter value signals; and

displaying the geometric representation of the engine case static structure.

19. (Original) The method of claim 17, wherein the step of receiving a parameter value signal includes the step of employing a mouse to provide the value of the parameter signal.

20. (Original) The method of claim 19, wherein the step of employing the mouse includes altering a geometric representation of the engine case static structure.

21. (Original) A computerized system for designing an engine case static structure of a gas turbine engine, comprising:

an engine case static structure knowledge base for storing a plurality of engine case static structure design parameter signals corresponding to a plurality of design rule signals for creating a geometric representation of an engine case static structure;

selection means for receiving a parameter value signal corresponding to the design parameter signals;

processing means for comparing the parameter value signal with the design parameter signals stored in the engine case static structure knowledge base; and

means for creating the geometric representation of the engine case static structure if the parameter value signal has a first predetermined relationship with the design parameter signal and the design rule signals.

22. (Original) A computerized system for designing an engine case static structure of a gas turbine engine, comprising:

an engine case static structure knowledge base including a plurality of design rule signals for generating signals representing an engine case static structure model, wherein each of the design rule signals has a first relationship with a design parameter signal;

input means for receiving a design parameter value signal corresponding to the design parameter signal;

evaluation means for comparing the design parameter value signal with the plurality of design rule signals;

adjustment means for modifying the engine case static structure model signals utilizing the design parameter value signal and the plurality of design rule signals; and

creation means for generating signals representative of a geometric representation of the engine case static structure model signals.

23. (Original) The computerized system of claim 22, wherein the design parameter signals include flowpath parameter signals received from the input means and performance parameter signals received from the input means.

24. (Original) The computerized system of claim 23, further including means, utilizing the design rule signals, for creating the engine case static structure model configuration signals utilizing the flowpath parameter signals, the performance parameter signals, and the plurality of design rule signals.

25. (Original) The computerized system of claim 22, further including:

cautionary means for generating a warning signal if the parameter value signal does not satisfy the plurality of the design rule signals; and

means for displaying the warning signal.

26. (Original) The computerized system of claim 22, further including:

material parameter signals received from the input means;

means for generating weight signals for the engine case static structure model utilizing material parameter signals and engine case static structure model signals.

27. (Original) The computerized system of claim 22, wherein the design parameter signals include performance parameter signals for generating analysis signals of the engine case static structure model, and manufacturing parameter signals for establishing manufacturing constraints and preferences for the engine case static structure model.